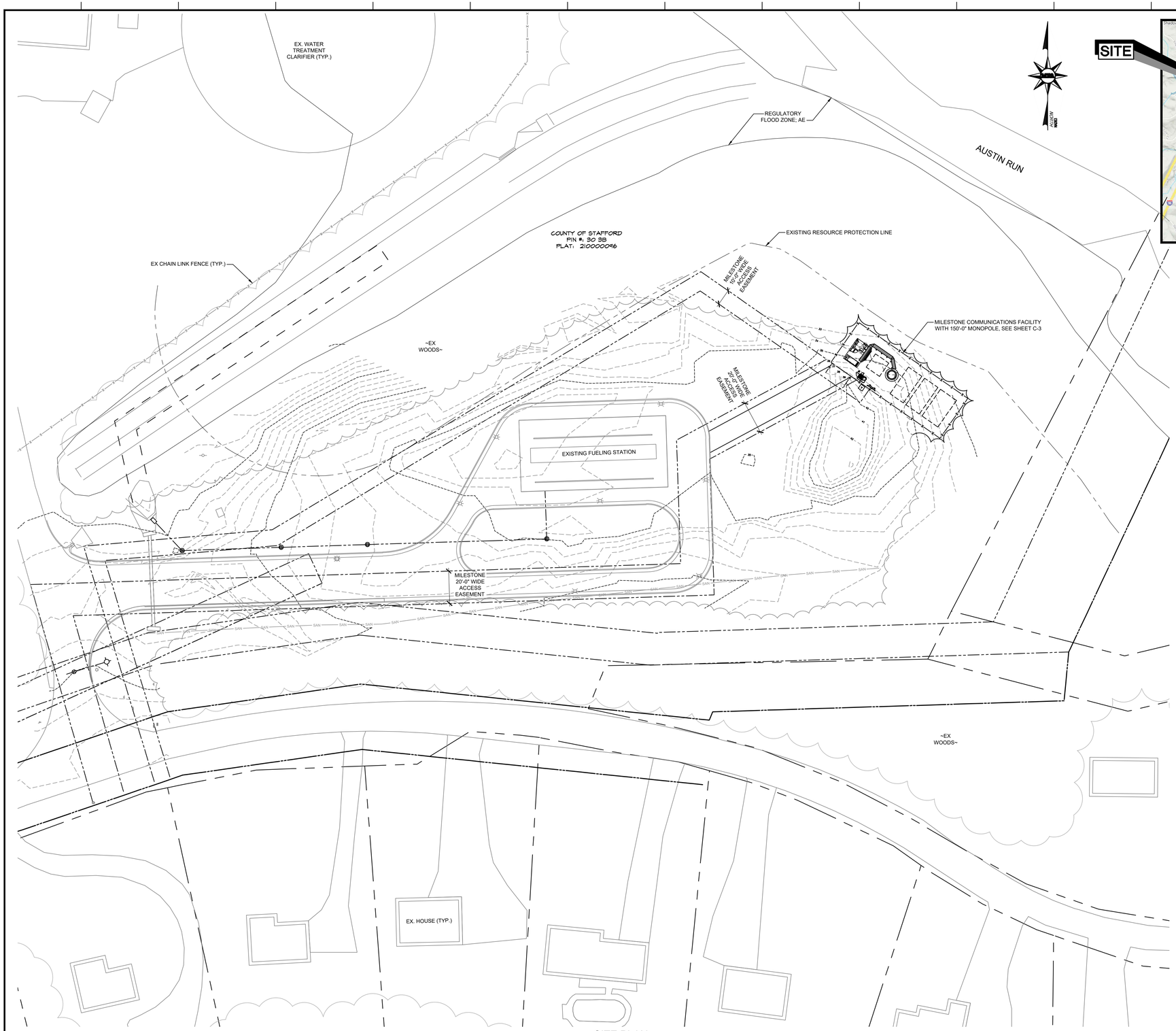
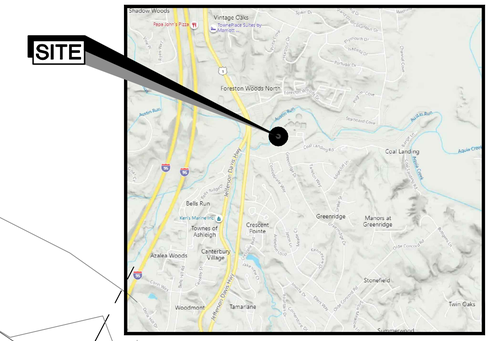


SITE PLAN

SCALE: 1" = 30'-0"

30 0 30 60 90

Scale 1" = 30'
(SCALE BASED ON FULL SIZE 24"x36" SHEETS ONLY)



VICINITY MAP

SCALE: 1" = 2,000'

SITE NOTES:

1. APPLICANT: MILESTONE TOWERS
12110 SUNSET HILLS ROAD, SUITE 600
RESTON, VA 20190
TEL. (703) 620-2555

2. PROPERTY OWNER: COUNTY OF STAFFORD
P.O. BOX 339
STAFFORD, VA 22555

3. SITE DATA: DEED BOOK 293, PAGE 577
ALTERNATE ID: 19196
PROPERTY ID: 30 3B
TRACT AREA: 55.1237 ACRES
NEIGHBORHOOD: 300000 MAIN MAP 30
ADDRESS: 71 COAL LANDING ROAD
STAFFORD, VIRGINIA 2254
EXISTING USE: WASTEWATER TREATMENT PLANT

4. ZONING: M1 (LIGHT INDUSTRIAL)

5. HORIZONTAL AND VERTICAL CONTROL SHOWN HEREON IS BASED ON NORTH AMERICAN DATUM OF 1983 (NAD 83) AND NORTH AMERICAN DATUM OF 1988 (NAVD 88) BY MORRIS & RITCHIE ASSOCIATES DATED FEB. 22 2022:
LATITUDE: N38.446922 (N38° 26' 48.92")
LONGITUDE: W77.394461 (W77° 23' 40.08")
GROUND ELEVATION: 35.0' AMSL (AVG.)
PROPOSED STRUCTURE HEIGHT: 150.00' AGL
TOTAL ELEVATION (AMSL): 185.00' AMSL

6. TOTAL DISTURBED AREA = 4.471 SF (0.10 ACRES)

7. THE PROPOSED FACILITIES WILL CONSIST OF ONE (1) 10' LONG x 20' WIDE CONCRETE EQUIPMENT PAD WITHIN A 82'x30' FENCED COMPOUND. ONE (1) ANTENNAS SHALL BE MOUNTED ON AN PROPOSED 150'-0" MONOPOLE WITH A RAD CENTER AT AN ELEVATION OF 150'-0" ABOVE GRADE LEVEL

8. THE STRUCTURE WILL NOT SUPPORT LIGHTS OR SIGNS UNLESS REQUIRED FOR AIRCRAFT WARNING OR OTHER SAFETY RECORDS.

9. THE APPLICANT WILL PROVIDE A CERTIFICATION FROM A REGISTERED ENGINEER THAT THE STRUCTURE WILL MEET THE APPLICABLE DESIGN STANDARDS FOR WIND LOADS PER THE REQUIREMENTS OF THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION.

10. IF THE ANTENNAS ARE NO LONGER USED FOR TELECOMMUNICATIONS PURPOSES FOR A CONTINUOUS PERIOD OF ONE (1) YEAR, THEY SHALL BE REMOVED BY THE ANTENNA OWNER AT OWNER'S EXPENSE.

11. NO WATER OR SANITARY UTILITIES ARE REQUIRED FOR THE OPERATION OF THIS FACILITY.

12. STORMWATER MANAGEMENT NOTE: NO STORMWATER MANAGEMENT IS REQUIRED FOR THIS SITE.

13. BOUNDARY SHOWN PER COUNTY RECORDS. EXISTING SITE FEATURES SHOWN PER SURVEY BY MORRIS & RITCHIE ASSOCIATES, INC. FEB. 2022.

14. THIS PLAN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. PLAN IS SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

15. ALL DETAILS SHOWN ARE "STANDARD" OR "TYPICAL" FOR REFERENCE ONLY. FOR ACTUAL DETAILS, SEE ARCHITECTURAL, STRUCTURAL, OR CONSTRUCTION PLANS BY OTHERS.

16. STRUCTURAL ANALYSIS/DESIGN TO BE PERFORMED BY OTHERS AT CLIENT AND/OR OWNER'S DISCRETION PRIOR TO COMMENCEMENT OF ANY WORK.

17. THE COMMUNICATION CONCRETE PAD SHALL BE UNMANNED, WITH INFREQUENT VISITS (FOUR OR FEWER PER YEAR) BY MAINTENANCE PERSONNEL, AND WITH ACCESS AND PARKING FOR NO MORE THAN ONE VEHICLE. THE PROPOSED FACILITY IS NOT FOR HUMAN HABITATION AND THEREFORE HANDICAP ACCESS IS NOT REQUIRED.

18. THE PROPOSED COMMUNICATIONS CONCRETE PAD, ANTENNAS AND RELATED MOUNTING DEVICES DO NOT EXCEED TWELVE (12) FEET IN TOTAL HEIGHT.

GENERAL NOTES

1. CONTRACTOR SHALL NOTIFY "MISS UTILITY" (811) 48 HOURS PRIOR TO DOING ANY EXCAVATION IN THIS AREA. CONTRACTOR SHALL CONTACT A SUBSURFACE UTILITY LOCATOR FOR LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL VERIFY EXISTING UTILITY LOCATIONS BY TEST PIT AS NECESSARY. LOCATION OF UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE AND FOR PLANNING PURPOSES ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. DAMAGE TO UTILITIES OR PROPERTY OF OTHER BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED TO PRECONSTRUCTION CONDITIONS BY THE CONTRACTOR.

2. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES, THE LATEST EDITION THEREOF.

3. ANY PERMITS WHICH MUST BE OBTAINED SHALL BE THE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS FOR THIS PROJECT FROM ALL APPLICABLE GOVERNMENTAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.

4. CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS WITH APPROPRIATE UTILITY OWNERS.

5. THESE PLANS ARE NOT FOR RECORDATION OR CONVEYANCE.

6. EXISTING PAVEMENT AND OTHER SURFACES DISTURBED BY CONTRACTOR (WHICH ARE NOT TO BE REMOVED) SHALL BE REPAIRED TO PRECONSTRUCTION CONDITIONS BY THE CONTRACTOR.

SETBACK REQUIREMENTS TABLE

NAME	PROVIDED	REQUIRED
NEAREST RESIDENCE	202'-3"±	
NORTH PROPERTY	107'-5"±	107'-0"
EAST PROPERTY	481'-9"±	107'-0"
SOUTH PROPERTY	107'-8"±	107'-0"
WEST PROPERTY	108'-2"±	107'-0"

Milestone Towers
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SUITE 600
RESTON, VIRGINIA 20190
OFFICE: (703) 620-2555

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Civil / Structural Engineers
1220-B East Joppa Road, Suite 400K
Towson, Maryland 21286
410-821-1690
410-821-1748 Fax

COMMONWEALTH OF VIRGINIA
04/29/22
JACOB TORONEY
Lic. No. 052906
PROFESSIONAL ENGINEER

MILESTONE SITE NAME:
AQUIA RUN WASTEWATER TREATMENT PLANT
SITE ADDRESS:
71 COAL LANDING ROAD
STAFFORD, VIRGINIA 22554
STAFFORD COUNTY

REVISIONS:

NO.	DESCRIPTION	DATE

DESIGNED BY:	DNT
DRAWN BY:	JT
PROJECT NO:	21235.003
DATE:	12/30/2021
SCALE:	AS NOTED

811
Know what's below.
Call before you dig.
PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE
THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPURTENANT.

TITLE:
Partial Site Plan

SHEET:
C-1

SITE PLAN

SCALE: 1" = 100'-0"

100 0 100 200 300

Scale 1" = 100'
(SCALE BASED ON FULL SIZE 24"x36" SHEETS ONLY)

PROPERTY OWNER CHART			
#	OWNER NAME	PARCEL ID	DEED BOOK / INSTRUMENT
1	THE HUBBARD GROUP	30X 1 A	130020810
2	THE HUBBARD GROUP	30 3N	40009902
3	GHR INVESTMENTS LLC	3OFF 1	150005476X
4	GHR INVESTMENTS LLC	3OFF 2	150005476X
5	ISLAMIC CENTRE OF STAFFORD VA	3OFF 4	180018896
6	AQUIA HARBOUR PROP OWNERS ASSOC. INC.	30 3C	150003698
7	AQUIA HARBOUR PROP OWNERS ASSOC. INC.	21B 1117	822/767
8	AQUIA HARBOUR PROP OWNERS ASSOC. INC.	21B 1051	822/767
9	AQUIA HARBOUR PROP OWNERS ASSOC. INC.	21B 1050	822/767
10	AQUIA HARBOUR PROP OWNERS ASSOC. INC.	21B 918	822/767
11	AQUIA TERRACE BORROWER LLC	30 3S	050050664X
12	AQUIA TERRACE BORROWER LLC	30 3A	40012571

PROPERTY OWNER CHART (CONT'D)			
#	OWNER NAME	PARCEL ID	DEED BOOK / INSTRUMENT
13	FRANK SPARSARO & BETTY GRIMSLEY	30 152E	010006517
14	JOANN NADEAU	30 152B	130026374
15	CAROL SUTHERLAND	30G 8 1	960007260
16	RONIN & GLORIA BREEZE	30G 8 2	210032911
17	JACK OLDROYD	30G 8 3	980009849
18	MONIQUE HAIRSTON	30G 8 4	090000183
19	PERAZA NUNEZ	30G 8 5	180002869

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COMMONWEALTH OF VIRGINIA
04/29/22
JACOB TORONEY
Lic. No. 052906
PROFESSIONAL ENGINEER

MILESTONE SITE NAME:
AQUIA RUN WASTEWATER
TREATMENT PLANT
SITE ADDRESS:
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STAFFORD, VIRGINIA 22554
STAFFORD COUNTY

REVISIONS:

NO.	DESCRIPTION	DATE

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DRAWN BY:	JT
PROJECT NO:	21235.003
DATE:	12/30/2021
SCALE:	AS NOTED

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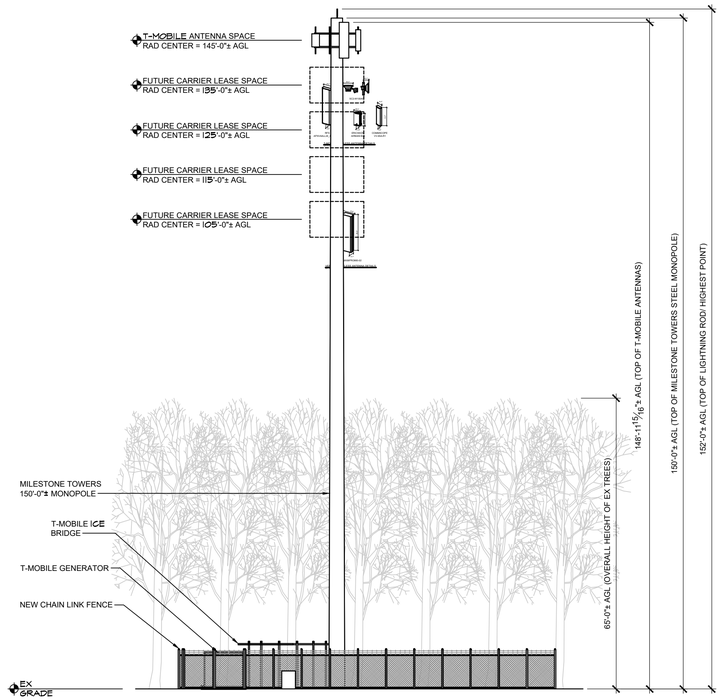
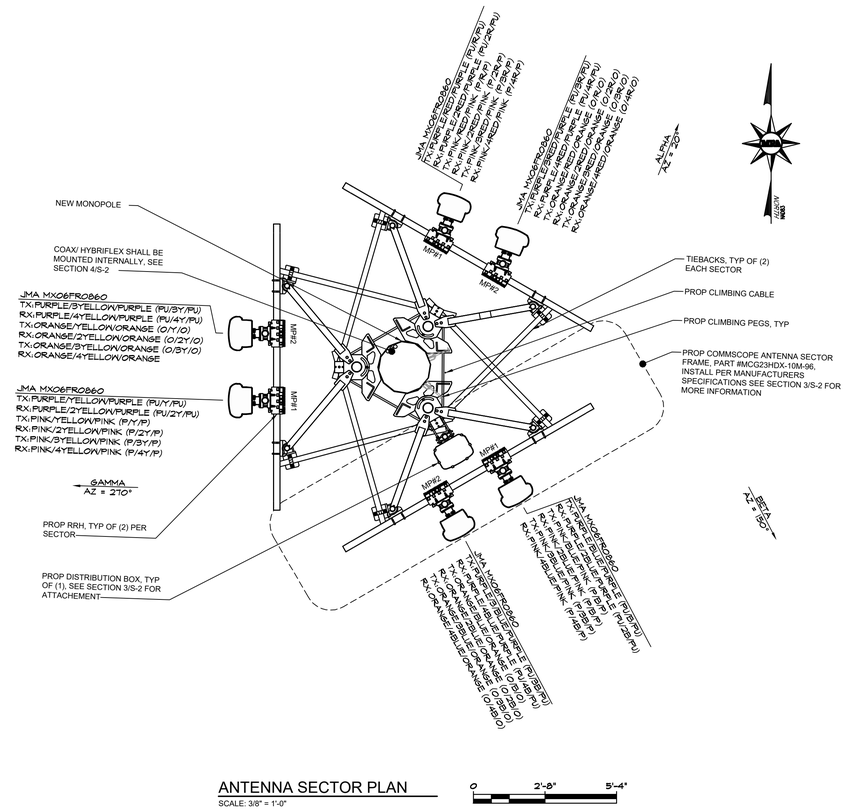
TITLE:
Site Plan

SHEET:
C-1A



MONOPOLE ELEVATION

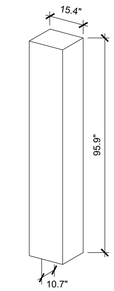
NOT TO SCALE



ANTENNA SECTOR PLAN

SCALE: 3/8" = 1'-0"

0 2'-8" 5'-4"



JMA MX06FR0860-02

PROPOSED WIRELESS ANTENNA DETAILS

NOT TO SCALE

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12110 SUNSET HILLS ROAD, SUITE 600
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04/29/22
JACOB TORONEY
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PROFESSIONAL ENGINEER

MILESTONE SITE NAME:
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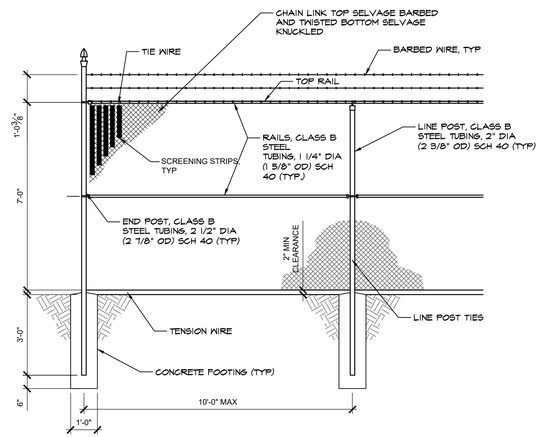
TITLE:

Site Details

SHEET:

C-2

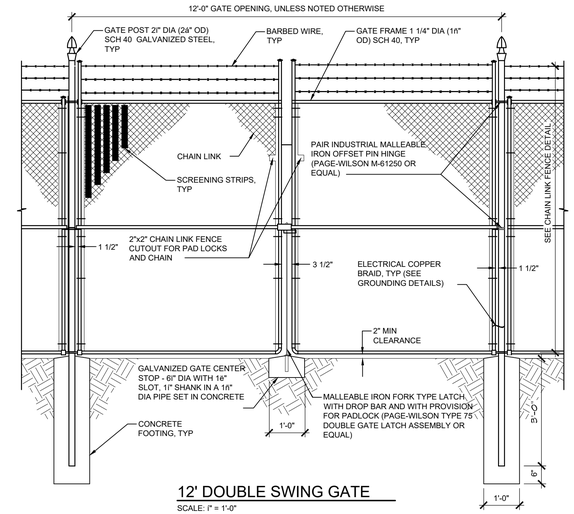


CHAIN LINK FENCE DETAIL

SCALE: 1" = 1'-0"

TYPICAL WOVEN WIRE FENCE NOTES

1. GATE POST, CORNER, TERMINAL OR PULL POST 2 1/2" DIA (2 7/8" OD) SCHEDULE 40 FOR GATE WIDTHS UP THRU 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POST, 2" DIA (2 3/8" OD) SCHEDULE 40 PIPE PER ASTM-F1083.
3. GATE FRAME: 1 1/4" DIA (1 5/8" OD) SCHEDULE 40 PIPE PER ASTM-F1083.
4. TOP RAIL & BRACE RAIL: 1 1/4" DIA (1 5/8" OD) SCHEDULE 40 PIPE PER ASTM-F1083.
5. FABRIC: 9 GA CORE WIRE SIZE, 2" MESH, CONFORMING TO ASTM-A392.
6. TIE WIRE: MINIMUM 11 GA GALVANIZED STEEL AT POSTS AND RAILS, A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAX 24" INTERVALS.
7. TENSION WIRE: 7 GA GALVANIZED STEEL.
8. BARBED WIRE: DOUBLE STRAND 12-2 1/2' OD TWISTED WIRE TO MATCH WITH FABRIC, 14 GA. 4 PT BARBS SPACED ON APPROXIMATELY 4" CENTERS.
9. GATE LATCH: 1-3/8" OD PLUNGER ROD WITH MUSHROOM TYPE CATCH AND LOCK, KEYED ALIKE FOR ALL SITES IN A GIVEN MTA.
10. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED WITH, IF REQUIRED.
11. CHAINLINK FENCE SHALL INCLUDE VERITCAL PVC SCREENING SLATS, ALL SIDED. (COLOR: DARK GREEN OR BLACK)

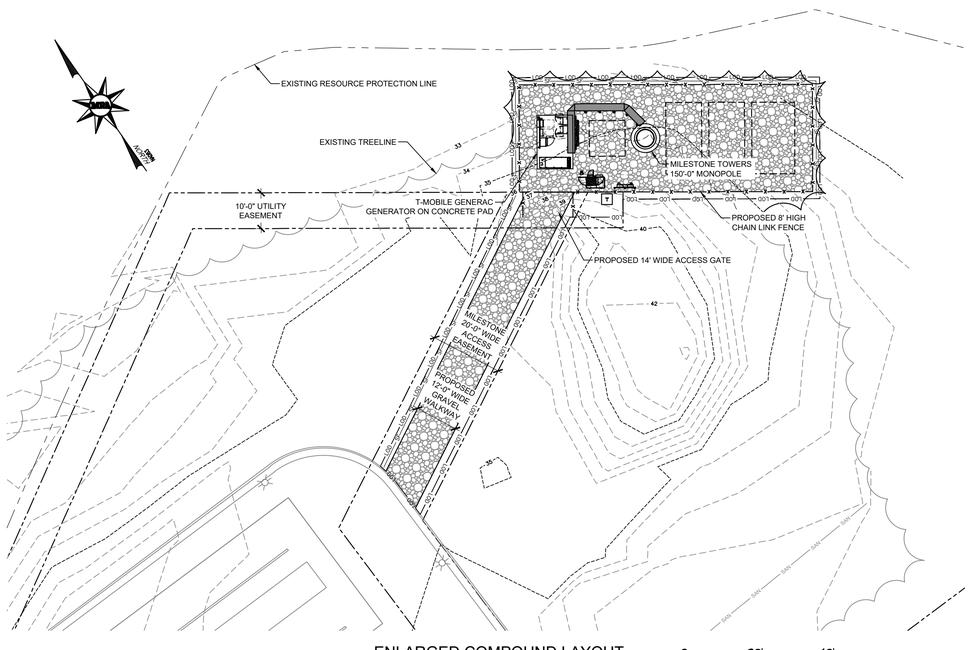


12' DOUBLE SWING GATE

SCALE: 1" = 1'-0"

TYPICAL WOVEN WIRE FENCE NOTES

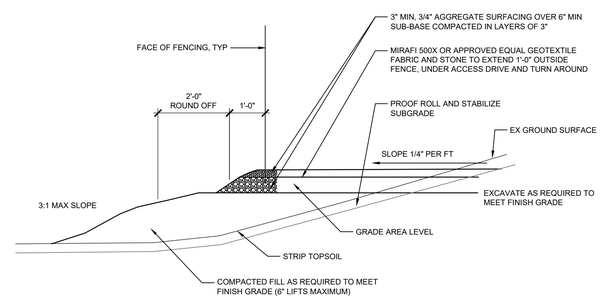
1. GATE POST, CORNER, TERMINAL OR PULL POST 2 1/2" DIA (2 7/8" OD) SCHEDULE 40 FOR GATE WIDTHS UP THRU 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POST, 2" DIA (2 3/8" OD) SCHEDULE 40 PIPE PER ASTM-F1083.
3. GATE FRAME: 1 1/4" DIA (1 5/8" OD) SCHEDULE 40 PIPE PER ASTM-F1083.
4. TOP RAIL & BRACE RAIL: 1 1/4" DIA (1 5/8" OD) SCHEDULE 40 PIPE PER ASTM-F1083.
5. FABRIC: 9 GA. CORE WIRE SIZE, 2" MESH, CONFORMING TO ASTM-A392.
6. TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL AT POSTS AND RAILS, A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAX. 24" INTERVALS.
7. TENSION WIRE: 7 GA. GALVANIZED STEEL.
8. BARBED WIRE: DOUBLE STRAND 12-2 1/2" OD TWISTED WIRE TO MATCH WITH FABRIC, 14 GA. 4 PT. BARBS SPACED ON APPROXIMATELY 4" CENTERS.
9. GATE LATCH: 1-3/8" OD PLUNGER ROD WITH MUSHROOM TYPE CATCH AND LOCK, KEYED ALIKE FOR ALL SITES IN A GIVEN MTA.
10. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED WITH, IF REQUIRED.



ENLARGED COMPOUND LAYOUT

SCALE: 1" = 20'-0"

0 20' 40'



CONSTRUCTION NOTES:

1. CLEAR AND GRUB THE LAND ALONG THE ACCESS DRIVE.
2. REMOVE ALL EXISTING ORGANIC MATERIAL TO SUITABLE SUBGRADE.
3. PLACE GEOTEXTILE FABRIC OVER SUBGRADE AND THEN PLACE AGGREGATE BASE.
4. GRAVEL SUBBASE SPECIFICATION:
   MARYLAND DOT: SECTION 304 GRADED AGGREGATE BASE COURSE
   VIRGINIA DHT: SECTION 210 AGGRGATE BASE COURSE

LEASE AREA, ACCESS DRIVE & TURN AROUND AREA SURFACING

SCALE: 1/2" = 1'-0"

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COMMONWEALTH OF VIRGINIA
04/29/22
JACOB TORONEY
Lic. No. 052906
PROFESSIONAL ENGINEER

MILESTONE SITE NAME:
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SITE ADDRESS:
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STAFFORD, VIRGINIA 22554
STAFFORD COUNTY

REVISIONS:

NO.	DESCRIPTION	DATE

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PROJECT NO:	21235.003
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SCALE:	AS NOTED

811
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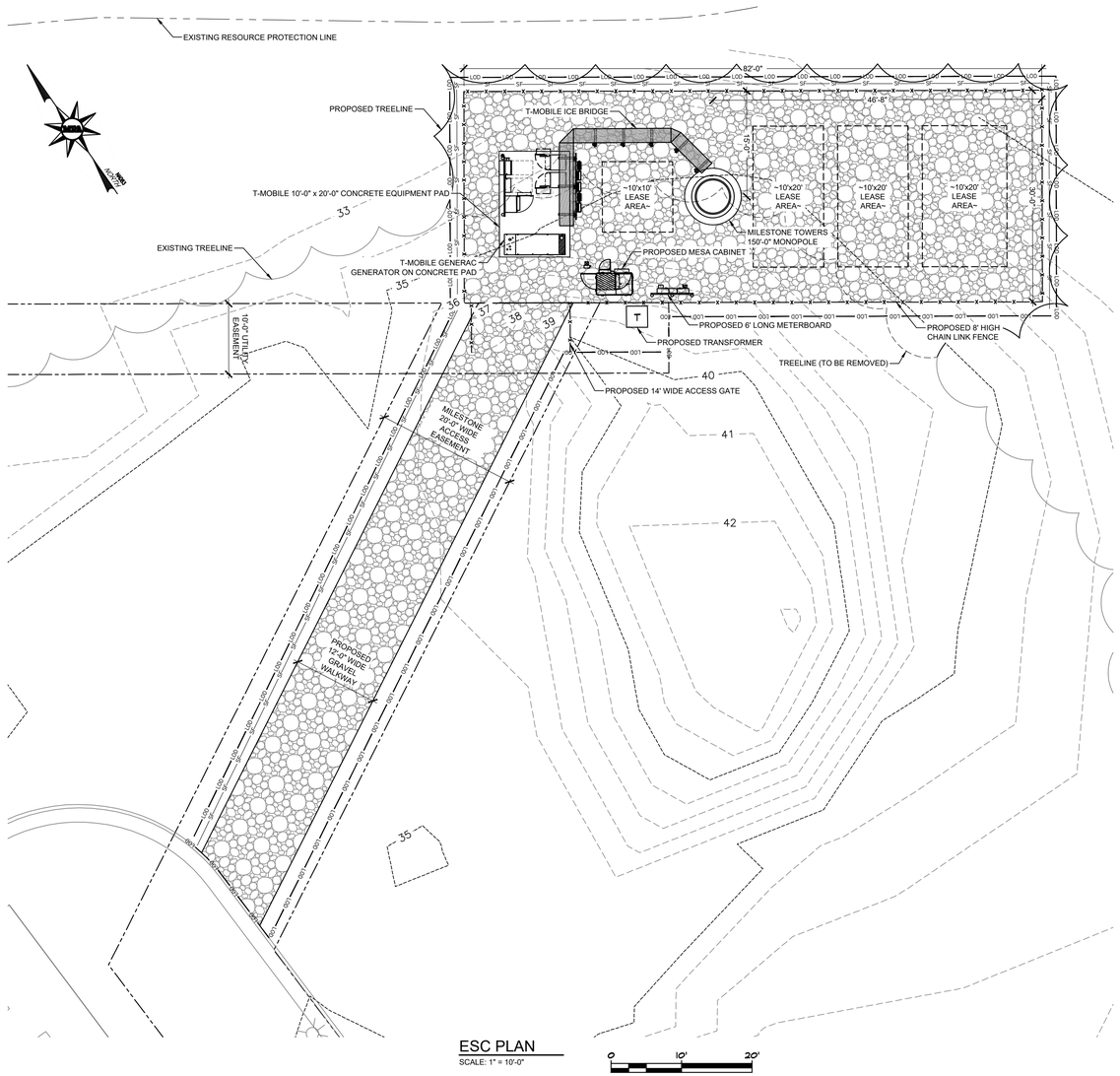
TITLE:
Site Details

SHEET:
C-3



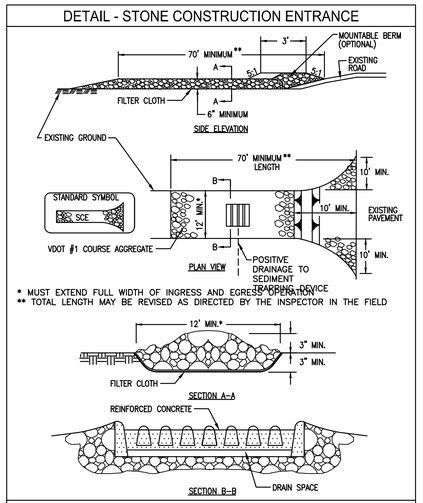
ESC PLAN
SCALE: 1" = 10'-0"

0 10' 20'

LEGEND

	PROPERTY LINE
	R/W
	EX. EASEMENT LINE
GlbB	SOILS LINE & (HYDROLOGIC GROUP)
	EX. BUILDING
	EX. CONCRETE
41	EX. 1' CONTOUR
40	EX. 5' CONTOUR
	EX. OVERHEAD LINE
UG	EX. UNDERGROUND ELECTRIC LINE
	EX. TREE LINE
	EX. TREES
LOD	LIMIT OF DISTURBANCE (L.O.D)
433	PROP. 0.5' CONTOUR
434	PROP. 1' CONTOUR
435	PROP. 5' CONTOUR
	PROP. GRAVEL
SF	PROP. SILT FENCE
	PROP. TYPE 'A-2' EARTH DIKE
	STABILIZED CONSTRUCTION ENTRANCE (50' MIN.)
	MOUNTABLE BERM (TYPE 'B')

DETAIL - STONE CONSTRUCTION ENTRANCE



SOURCE: VA. DSWC PLATE: 3.02

CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)

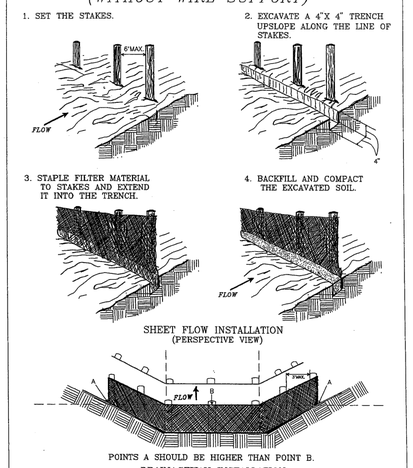


TABLE 3.31-C

TEMPORARY SEEDING PLANT MATERIALS, SEEDING RATES, AND DATES

SPECIES	SEEDING RATE		NORTH[a]			SOUTH[b]			PLANT CHARACTERISTICS
	Acre	1000 ft²	3/1 to 4/30	5/1 to 8/15	8/15 to 11/1	2/15 to 4/30	5/1 to 9/1	9/1 to 11/15	
OATS (Avena sativa)	3 bu. (up to 100 lbs., not less than 50 lbs.)	2 lbs.	X	-	-	X	-	-	Use spring varieties (e.g., Noble).
RYE[d] (Secale cereale)	2 bu. (up to 110 lbs., not less than 50 lbs.)	2.5 lbs.	X	-	X	X	-	X	Use for late fall seedings, winter cover. Tolerates cold and low moisture.
GERMAN MILLET (Setaria italica)	50 lbs.	approx. 1 lb.	-	X	-	-	X	-	Warm-season annual. Dies at first frost. May be added to summer mixes.
ANNUAL RYEGRASS[d] (Lolium multi-florum)	60 lbs.	1½ lbs.	X	-	X	X	-	X	May be added in mixes. Will mow out of most stands.
WEEPING LOVEGRASS (Eragrostis curvula)	15 lbs.	5½ ozs.	-	X	-	-	X	-	Warm-season perennial. May bunch. Tolerates hot, dry slopes and acid, infertile soils. May be added to mixes.
KOREAN LESPEDEZA[c] (Lespedeza stipulacea)	25 lbs.	approx. 1½ lbs.	X	X	-	X	X	-	Warm season annual legume. Tolerates acid soils. May be added to mixes.

[a] Northern Piedmont and Mountain region. See Plates 3.22-1 and 3.22-2.
[b] Southern Piedmont and Coastal Plain.
[c] May be used as a cover crop with spring seeding.
[d] May be used as a cover crop with fall seeding.
X May be planted between these dates.
\- May not be planted between these dates.

TABLE 3.31-B
ACCEPTABLE TEMPORARY SEEDING PLANT MATERIALS

PLANTING DATES	SPECIES	RATE (LBS./ACRE)
SEPT 1 - FEB 15	50 MIX OF ANNUAL RYEGRASS (Lolium multi-florum) & CEREAL (WINTER) RYE (Secale cereale)	50-100
FEB 16 - APR 30	ANNUAL RYEGRASS (Lolium multi-florum)	60-100
MAY 1 - AUG 31	GERMAN MILLET (Setaria Italica)	50

TABLE 3.35-A
ORGANIC MULCH MATERIALS AND APPLICATION RATES

MULCHES:	RATES: Per Acre	RATES: Per 1000 sq.ft.	NOTES:
Straw or Hay	1.5-2 Tons (Minimum 2 tons for winter cover)	70-90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand.
Fiber Mulch	Minimum 1500lbs.	35 lbs.	Do not use as a mulch for winter cover or during hot, dry periods.* Apply as slurry.
Corn Stalks	4-6 tons	185-275 lbs.	Cut or shredded in 4-6" lengths. Air-dried. Do not use in fine turf areas. apply with a mulch blower or by hand.
Wood Chips	4-6 tons	185-275 lbs.	Free of coarse matter. Air-dried. Treat with 12lbs. Nitrogen per ton. Do not use in fine turf areas. Apply with a mulch blower, chip handler, or by hand.
Bark Chips or Shredded Bark	50-70 cu. yds.	1-2 cu. yds.	Free of coarse matter. Air-dried. Do not use in fine turf areas. Apply with a mulch blower, chip handler, or by hand.

* When fiber mulch is the only available mulch during periods when straw should be used, apply at a minimum rate of 2000 lbs./ac. or 45lbs./1000 s.f.

Source: Va. DSWC

TABLE 3.32-C
SITE SPECIFIC SEEDING MIXTURES
FOR APPALACHIAN/MOUNTAIN AREA

	Total Lbs. Per Acre
Minimum Care Lawn	
- Commercial or Residential	200-250 lbs.
- Kentucky 31 or Turf-Type Tall Fescue	90-100%
- Improved Perennial Ryegrass *	0-10%
- Kentucky Bluegrass	0-10%
High-Maintenance Lawn	
Minimum of three (3) up to five (5) varieties of bluegrass from approved list for use in Virginia.	125 lbs.
General Slope (3:1 or less)	
- Kentucky 31 Fescue	128 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop **	20 lbs.
	150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	
- Kentucky 31 Fescue	108 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop **	20 lbs.
- Crownvetch ***	20 lbs.
	150 lbs.

* Perennial Ryegrass will germinate faster and at lower soil temperatures than fescue, thereby providing cover and erosion resistance for seedbed.

** Use seasonal nurse crop in accordance with seeding dates as stated below:
March, April through May 15th ..... Annual Rye
May 16th through August 15th ..... Foxtail Millet
August 16th through September, October ..... Annual Rye
November through February ..... Winter Rye

*** If Flatpea is used, increase to 30 lbs./acre. All legume seed must be properly inoculated. Weeping Lovegrass may also be included in any slope or low-maintenance mixture during warmer seeding periods; add 10-20 lbs/acre in mixes.

Milestone Towers
12110 SUNSET HILLS ROAD, SUITE 600
RESTON, VIRGINIA 20190
OFFICE: (703) 620-2555

MORRIS & RITCHIE ASSOCIATES, INC.
Civil / Structural Engineers
1220-B East Joppa Road, Suite 400K
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COMMONWEALTH OF VIRGINIA
04/29/22
JACOB TORONEY
Lic. No. 052906
PROFESSIONAL ENGINEER

MILESTONE SITE NAME:
AQUIA RUN WASTEWATER TREATMENT PLANT
SITE ADDRESS:
71 COAL LANDING ROAD
STAFFORD, VIRGINIA 22554
STAFFORD COUNTY

REVISIONS:

NO.	DESCRIPTION	DATE

DESIGNED BY: DNT
DRAWN BY: JT
PROJECT NO: 21235.003
DATE: 12/30/2021
SCALE: AS NOTED

811
Know what's below.
Call before you dig.
PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE
THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPURTENANT.

TITLE:
Erosion & Sediment Control Plan

SHEET:
C-4

MINIMUM STANDARDS

NOTE: ALL REFERENCES ARE MADE TO THE STANDARDS AND SPECIFICATIONS OF THE 1992 VIRGINIA EROSION AND CONTROL HANDBOOK.

1. SOIL STABILIZATION
   - PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.
   - TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS BUT LESS THAN ONE YEAR.
   - PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

2. SOIL STOCKPILE STABILIZATION
   DURING CONSTRUCTION, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES, TEMPORARY PROTECTION AND PERMANENT STABILIZATION SHALL BE APPLIED TO ALL SOIL STOCKPILES ON SITE AND BORROW AREA OR SOIL INTENTIONALLY TRANSFERRED OFF SITE.

3. PERMANENT STABILIZATION
   PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED STABILIZED UNTIL GROUND COVER IS ACHIEVED THAT IS:
   - UNIFORM
   - MATURE ENOUGH TO SURVIVE
   - WILL INHIBIT EROSION

4. SEDIMENT BASINS & TRAPS
   - SEDIMENT BASINS, SEDIMENT TRAPS, PERIMETER DIKES , SEDIMENT BARRIERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

5. STABILIZATION OF EARTHEN STRUCTURES
   - STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

6. SEDIMENT TRAPS & SEDIMENT BASINS
   - SEDIMENT TRAPS AND BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN AS FOLLOWS:
   - ONLY CONTROL DRAINAGE AREA LESS THAN OR THREE ACRES.
   - MINIMUM STORAGE CAPACITY OF 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA

7. CUT AND FILL SLOPES DESIGN & CONSTRUCTION
   CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

8. CONCENTRATED RUNOFF DOWN SLOPES, CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME, OR SLOPE DRAIN STRUCTURE.

9. SLOPE MAINTENANCE
   WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE OR OTHER PROTECTION SHALL BE PROVIDED.

10. STORM WATER INLET PROTECTION
    ALL STORM WATER SEWER INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE STORMWATER CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED/TREATED TO REMOVE.

11. STORM WATER CONVEYANCE PROTECTION
    BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATION, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND THE RECEIVING CHANNEL.

12. WATER IN LIVE WATERCOURSE
    WHEN WORK IN A LIVE WATERSOURCE IS PERFORMED.
    - PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT, AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION.
    - NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS.
    - EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.

13. CROSSING LIVE WATERCOURSE
    WHEN WORK IN A LIVE WATERSOUCE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX MONTH PERIOD. A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.

14. REGULATION OF WATERCOURSE CROSSING
    ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

15. STABILIZATION OF WATERCOURSE THE BED AND BACKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

16. UNDERGROUND AND UTILITY LINE INSTALLATION
    UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARD IN ADDITION TO OTHER APPLICABLE CRITERIA.
    - NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME
    - EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES
    - EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCARDED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERLY.
    - MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION
    - RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS
    - COMPLY WITH APPLICABLE SAFETY REGULATIONS

17. VEHICULAR SEDIMENT TRACKING. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROAD.
    - PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACES
    - WHERE SEDIMENT IS TRANSPORTED INTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY
    - SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.

18. REMOVAL OF TEMPORARY MEASURES
    ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE PROGRAM AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

19. STORMWATER MANAGEMENT, PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION, AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY, AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATE FREQUENCY STORM OR 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA:

GENERAL EROSION AND SEDIMENT CONTROL NOTES

ES-1 UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 9VAC25-840 EROSION AND SEDIMENT CONTROL REGULATIONS.

ES-2 THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3 ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES-4 A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-5 PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

ES-6 THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

ES-7 ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8 DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9 THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

VESCH TEMPORARY SEEDING NOTES

1. TEMPORARY SEEDING SHALL BE APPLIED TO EXPOSED SOIL SURFACES THAT ARE NOT TO BE FINE GRADED FOR PERIODS LONGER THAN 14 DAYS. PERMANENT VEGETATIVE COVER SHALL BE APPLIED TO AREAS THAT WILL BE LEFT DORMANT FOR A PERIOD OF MORE THAN 1 YEAR.
2. PLANTS SHALL BE SELECTED ACCORDING TO SEASON AND SITE CONDITIONS PER VESCH TABLES 3.31-B AND 3.31-C.
3. AN EVALUATION SHOULD BE CONDUCTED TO DETERMINE IF LIME IS NECESSARY FOR TEMPORARY SEEDING. SHOULD LIME BE REQUIRED, LIME SPECIFICATIONS SHALL BE PER VESCH TABLE 3.31-A
4. FERTILIZER SHALL BE APPLIED AS 600 LBS/ACRE OF 10-20-10 (14 LBS. /1000 SF) OR EQUIVALENT. NUTRIENTS. LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2 TO 4 INCHES OF THE SOIL IF POSSIBLE
5. IF AN AREA HAS BEEN RECENTLY LOOSENED OR DISTURBED, NO FURTHER SURFACE ROUGHENING IS REQUIRED PRIOR TO PLANTING. WHEN THE AREA IS COMPACTED, CRUSTED OR HARDENED, THE SOIL SURFACE SHALL BE LOOSENED BY DISCING, RAKING, HARROWING, OR OTHER ACCEPTABLE MEANS.
6. SEED SHALL BE EVENLY APPLIED WITH A BROADCAST SEEDER, DRILL, CULTIPACKER SEEDER OR HYDROSEEDER. SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1.5 INCHES DEEP. SMALL SEEDS, SUCH AS KENTUCKY BLUEGRASS, SHOULD BE PLANTED NO MORE THAN 1/4 INCH DEEP. OTHER GRASSES AND LEGUMES SHOULD BE PLANTED FROM 1/4 INCH TO 1/2 INCH DEEP.
7. SEEDINGS MADE IN FALL FOR WINTER COVER AND DURING HOT AND DRY SUMMER MONTHS SHALL BE MULCHED ACCORDING TO "MULCHING", VESCH STD. AND SPEC. 3.35, EXCEPT THAT HYDROMULCHES (FIBER MULCH) WILL NOT BE CONSIDERED ADEQUATE. STRAW MULCH SHOULD BE USED DURING THESE PERIODS. TEMPORARY SEEDINGS MADE UNDER FAVORABLE SOIL AND SITE CONDITIONS DURING OPTIMUM SPRING AND FALL SEEDING DATES MAY NOT REQUIRE MULCH
8. AREAS WHICH FAIL TO ESTABLISH VEGETATIVE COVER ADEQUATE TO PREVENT EROSION WILL BE RESEEDED AS SOON AS SUCH AREAS ARE IDENTIFIED.
9. SEE VESCH STD & SPEC. 3.31 FOR MORE DETAILED SPECIFICATIONS FOR TEMPORARY SEEDING

VESCH PERMANENT SEEDING NOTES

1. PERMANENT SEEDING SHALL BE APPLIED TO DISTURBED AREAS WHERE PERMANENT, LONG LIVED VEGETATIVE COVER IS NEEDED TO STABILIZE THE SOIL AND IN ROUGH GRADED AREAS WHICH WILL NOT BE BROUGHT TO FINAL GRADE FOR A YEAR OR MORE.
2. FERTILIZER SHALL BE APPLIED AS SHOWN IN STD. & SPEC. 3.32 OF THE VESCH PAGE 307.
3. AN EVALUATION SHOULD BE CONDUCTED TO DETERMINE IF LIME IS NECESSARY FOR PERMANENT SEEDING. SHOULD LIME BE REQUIRED, LIME SPECIFICATIONS SHALL BE PER VESCH APPENDIX 3.32-D. IF A SOILS TEST CANNOT BE OBTAINED LIME SPECIFICATIONS SHALL BE 2 TONS/ACRE PULVERIZED AGRICULTURAL GRADE LIMESTONE (90 LBS./1000 SF.)
4. SURFACE ROUSHENING SHALL BE PERFORMED IN ACCORDANCE WITH VESCH STD. & SPEC. 3.29.
5. CERTIFIED SEED SHALL BE USED FOR ALL PERMANENT SEEDING WHENEVER POSSIBLE. THE SEED MUST MEET VIRGINIA STATE STANDARDS AND BEAR AN OFFICIAL "CERTIFIED SEED" LABEL (SEE APPENDIX 3.32A OF VESCH) SEED SHALL BE UNIFORMLY APPLIED WITH A BROADCAST SEEDER, DRILL, CULTIPACKER SEEDER OR HYDROSEEDER. SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1.5 INCHES DEEP. SMALL SEEDS, SUCH AS KENTUCKY BLUEGRASS, SHOULD BE PLANTED NO MORE THAN 1/4 INCH DEEP. OTHER GRASSES AND LEGUMES SHOULD BE PLANTED FROM 1/4 INCH TO 1/2 INCH DEEP.
6. MULCHING MUST OCCUR IMMEDIATELY UPON COMPLETION OF SEED APPLICATION. SEEDINGS MADE IN FALL FOR WINTER COVER AND DURING HOT AND DRY SUMMER MONTHS SHALL BE MULCHED ACCORDING TO "MULCHING", VESCH STD. AND SPEC. 3.35, EXCEPT THAT HYDROMULCHES (FIBER MULCH) WILL NOT BE CONSIDERED ADEQUATE. STRAW MULCH SHOULD BE USED DURING THESE PERIODS.
7. NEW SEEDINGS SHALL BE SUPPLIED WITH ADEQUATE MOISTURE. WATER APPLICATION RATES SHOULD BE CONTROLLED TO PREVENT EXCESSIVE RUNOFF.
8. SEE VESCH STD & SPEC. 3.32 FOR MORE DETAILED SPECIFICATIONS FOR PERMANENT SEEDING

A. TEMPORARY SEEDING SPECIFICATIONS
ALL DENUDED AREAS WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. PRIOR TO SEEDING, INSTALL NECESSARY CONTROL PRACTICES SUCH AS DIKES, WATERWAYS AND BASINS.

PLANT SELECTION
SELECT PLANTS APPROPRIATE TO THE SEASON AND SITE CONDITIONS FROM TABLES 3.31-B AND 3.31-C. NOTE THAT TABLE 3.31-B PRESENTS PLANTS WHICH CAN BE USED WITHOUT EXTENSIVE EVALUATION OF SITE CONDITIONS; TABLE 3.31-C PRESENTS MORE IN-DEPTH INFORMATION ON THE PLANT MATERIALS.

SEEDED PREPARATION
TO CONTROL EROSION ON BASE SOIL SURFACES, PLANTS MUST BE ABLE TO GERMINATE AND GROW. SEED BED PREPARATION IS ESSENTIAL. SEEDS SHALL BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1 1/2 INCHES DEEP.

1. LIMING
   AN ELEVATION SHOULD BE CONDUCTED TO DETERMINE IF LIME IS NECESSARY FOR TEMPORARY SEEDING. IN MOST SOILS, IT TAKES UP TO 6 MONTHS FOR PH ADJUSTMENT TO OCCUR FOLLOWING THE APPLICATION OF LIME. THEREFORE, IT MAY BE DIFFICULT TO JUSTIFY THE COST OF LIVING A TEMPORARY SITE, ESPECIALLY WHEN THE SOIL WILL LATER BE MOVED AND REGRADED. THE FOLLOWING TABLE MAY BE USED TO DETERMINE THE ACTUAL NEED ALONG WITH SUGGESTED APPLICATION RATES.

2. FERTILIZER
   SHALL BE APPLIED AS 600 LBS./ACRE OF 10-20-10 (14 LBS./1000 SQ. FT.) OR EQUIVALENT NUTRIENTS. LINE AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2 TO 4 INCHES OF THE SOIL IF POSSIBLE.

MULCHING
1. SEEDING MADE IN FALL FOR WINTER COVER AND DURING HOT AND DRY SUMMER MONTHS SHALL BE MULCHED ACCORDING TO MULCHING, STD. AND SPEC. 3.35 EXCEPT THAT HYDROMULCHES (FIBER MULCH) WILL NOT BE CONSIDERED ADEQUATE. STRAW MULCH SHOULD BE USED DURING THESE PERIODS.
2. TEMPORARY SEEDING MADE UNDER FAVORABLE SOIL AND SITE CONDITIONS DURING OPTIMUM SPRING AND FALL SEEDING DATES MAY REQUIRE MULCH.

B. PERMANENT SEEDING SPECIFICATIONS
PRIOR TO SEEDING, INSTALL NECESSARY CONTROL PRACTICES SUCH AS DIKES, WATERWAYS AND BASINS.

PLANT SELECTION
1. SELECTION OF PLANT MATERIALS IS BASED ON CLIMATE, TOPOGRAPHY, SOILS, LAND USE, AND PLANTING SEASON. TO DETERMINE WHICH PLANT MATERIALS ARE BEST ADAPTED TO A SPECIFIC SITE. USE TABLES 3.32-A AND 3.32-B WHICH DESCRIBE PLANT CHARACTERISTICS AND LIST RECOMMENDED VARIETIES.
2. APPROPRIATE SEEDING MIXTURES FOR VARIOUS SITE CONDITIONS IN VIRGINIA ARE GIVEN IN TABLES 3.32-C, 3.32-D AND 3.32-E. THESE MIXTURES ARE DESIGNED FOR GENERAL USE, AND ARE KNOWN TO PERFORM WELL IN THE SITES DESCRIBED. CHECK TABLES 3.32-A AND 3.32-B FOR RECOMMENDED VARIETIES.
3. A MORE EXTENSIVE DESCRIPTION OF PLANT MATERIALS (GRASSES AND LEGUMES), THEIR USAGE AND PICTORIAL REPRESENTATION CAN BE FOUND IN APPENDIX 3.32-C.
4. WHEN USING SOME VARIETIES OF TURFGRASSES, THE VIRGINIA CROP IMPROVEMENT ASSOCIATION (VCIA) RECOMMENDED TURFGRASS MIXTURES MAY ALSO BE USED. CONSUMER PROTECTION PROGRAMS HAVE BEEN DEVISED TO IDENTIFY QUALITY SEED OF THE VARIETIES RECOMMENDED BY THE VIRGINIA COOPERATIVE EXTENSION SERVICE. THESE WILL BEAR A LABEL INDICATING THAT THEY ARE APPROVED BY THE ASSOCIATION. MIXTURES MAY BE DESIGNED FOR A SPECIFIC PHYSIOGRAPHIC REGION OR BASED ON INTENDED USE. SPECIAL CONSIDERATION IS GIVEN TO PLANT CHARACTERISTICS, PERFORMANCE, ETC.
5. THE PLANTING SOIL MUST HAVE ENOUGH FINE GRAINED SOIL, SUFFICIENT PORE SPACE, SUFFICIENT DEPTH AND FREE FROM TOXIC OR EXCESSIVE QUANTITIES OF ROOTS AND SHALL BE APPLIED IN ACCORDANCE WITH STD. 3.30.

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION: THE PROPOSED FACILITIES WILL CONSIST OF ONE (1) 20'-0" LONG x 10'-0" WIDE CONCRETE EQUIPMENT PAD AND A 150' TALL MONOPOLE WITHIN A 2460 SF FENCED COMPOUND. ANTENNAS SHALL BE MOUNTED ON THE PROPOSED MONOPOLE FOR THE RECEPTION OF T-MOBILE WIRELESS TELECOMMUNICATIONS. LIMITS OF DISTURBANCE IS 4471 SF.

EXISTING SITE CONDITIONS: THE SITE IS LOCATED OFF OF COAL LANDING ROAD. THE SUBJECT PROPERTY CONSISTS OF WASTEWATER TREATMENT PLANT AND BUS FUELING STATION.

ADJACENT AREAS: THE SITE IS SURROUNDED BY THE AQUIA RUN WASTEWATER TREATMENT PLANT, COAL LANDING ROAD, AND FORESTED AREAS.

SOILS: SOIL TYPES AND MAPPING ARE TAKEN FROM THE STAFFORD COUNTY GIS.
1. THE SOLE SOIL IN THE CONSTRUCTION AREA IS 5A - SAND AND GRAVEL PITS.

CRITICAL AREAS: THERE ARE STEEP SLOPES ADJACENT TO THE SITE.

E&S CONTROL MEASURES:
THE FOLLOWING CONTROLS SHALL BE INSTALLED, FOR THIS PROJECT ONLY, IN ACCORDANCE WITH VIRGINIA ESC HANDBOOK:
1. SILT FENCE (3.05) - PROVIDES A PROTECTIVE BARRIER TRAPPING SILT AND KEEPING IT ONSITE WHILE ALLOWING WATER TO DRAIN THROUGH THE SILT FENCE.

THE EROSION AND SEDIMENT CONTROL INSPECTOR HAS THE AUTHORITY TO ADD OR DELETE E & S CONTROLS AS NECESSARY IN THE FIELD AS SITE CONDITIONS CHANGE.

MANAGEMENT STRATEGIES: SILT FENCE WILL BE PLACED ON ALL SIDES OF THE PROPOSED DISTURBED LAND, AS INDICATED ON THE PLANS. ALL CONTROLS SHALL REMAIN IN PLACE AND BE INSPECTED AND MAINTAINED DAILY UNTIL THE CONTRACTOR RECEIVES WRITTEN PERMISSION FROM THE EROSION AND SEDIMENT CONTROL INSPECTOR. ALL AREAS DISTURBED BY THIS PROCESS SHALL BE PERMANENTLY STABILIZED.

PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDE AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.

ALL CONSTRUCTION VEHICLES SHALL BE INSPECTED AFTER LEAVING THE CONSTRUCTION ENTRANCE AND PRIOR TO ENTERING PUBLIC ROADS TO ENSURE ALL MUD AND SEDIMENT HAS BEEN REMOVED FROM THE VEHICLE TIRES TO PREVENT TRACKING ONTO PUBLIC ROADS. IF THE TIRES OF A CONSTRUCTION VEHICLE ARE NOT ENTIRELY FREE OF MUD AND SEDIMENT AFTER LEAVING THE CONSTRUCTION ENTRANCE THE TIRES MUST BE CLEANED SO THAT NO MUD OR SEDIMENT REMAINS.

PERMANENT STABILIZATION: ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINAL GRADING. SEEDING SHALL BE DONE ACCORDING TO STD & SPEC 3.32, PERMANENT SEEDING.

SEQUENCE OF CONSTRUCTION:
1. A PRECONSTRUCTION MEETING WITH STAFFORD COUNTY SHALL BE PERFORMED PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE. THE PERMIT WILL NOT BE ISSUED UNTIL THE PRECONSTRUCTION MEETING IS HELD.
2. CONTACT MISS UTILITY 72 HOURS PRIOR TO THE START OF CONSTRUCTION AT 1-800-257-7777 OR 811.
3. INSTALL CONSTRUCTION ENTRANCE.
4. INSTALL PERIMETER CONTROLS (SILT FENCE) AS SHOWN ON THE E&S PLAN AND CONTACT THE COUNTY FOR INSPECTION.
5. PERFORM CLEARING AND GRADING.
6. INSTALL GRAVEL WALKWAY, GRAVEL COMPOUND, FENCING, PADS, AND TOWER.
7. PERMANENTLY STABILIZE ALL DISTURBED AREAS IMMEDIATELY FOLLOWING COMPLETION. AREAS NOT TO BE COVERED WITH GRAVEL SHALL BE BROUGHT TO FINAL GRADE WITH TOP SOIL, SEEDED AND VEGETATIVELY STABILIZED.
8. FOLLOWING STABILIZATION OF ALL DISTURBED AREAS, REMOVE SILT FENCE & CONSTRUCTION ENTRANCE. NO E&S MEASURES SHALL BE REMOVED WITHOUT THE APPROVAL OF THE COUNTY INSPECTOR.
9. STABILIZE ANY AREAS DISTURBED BY THE THE REMOVAL OF E&S MEASURES.

MAINTENANCE

ALL MEASURES ARE TO BE INSPECTED DAILY BY THE SITE SUPERINTENDENT. ANY DAMAGED CONTROLS SHALL BE REPAIRED AND/OR REPLACED BY THE CLOSE OF THE DAY.

1. SILT FENCE SHALL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
2. THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY.

NOTES:

A. STAFFORD COUNTY SHALL BE NOTIFIED 48 HOURS PRIOR TO START OF CONSTRUCTION

B. A COPY OF THE APPROVED DEVELOPMENT PLAN AND EROSION AND SEDIMENT CONTROL PLAN SHALL BE KEPT IN GOOD CONDITION ON THE SITE WITH THE BUILDING PERMIT DURING GRADING OPERATIONS

C. IN THE EVENT SUCH MAXIMUM PERIOD IS EXCEEDED AND ANY SUCH AREAS REMAIN EXPOSED WITHOUT COVER OR SURFACE, THE DIRECTOR OF PUBLIC WORKS AND CAPITAL PROJECTS MAY (IN THE EVENT THAT THE DEVELOPER FAILS TO DO SO) INSTALL SUCH STABILIZING MEASURES NECESSARY TO ACHIEVE EROSION AND SEDIMENT CONTROL EQUAL TO THAT WHICH WOULD HAVE BEEN FURNISHED BY THE PERMANENT COVER SHOWN ON THE APPROVED PLANS. THE COST OF ANY SUCH TEMPORARY MEASURES TAKEN BY THE DIRECTOR OF PUBLIC WORKS AND CAPITAL PROJECTS SHALL BE BORNE BY THE DEVELOPER.

Milestone Towers
12110 SUNSET HILLS ROAD, SUITE 600
RESTON, VIRGINIA 20190
OFFICE: (703) 620-2555

MORRIS & RITCHIE ASSOCIATES, INC.
Civil / Structural Engineers
1220-B East Joppa Road, Suite 400K
Towson, Maryland 21286
410-821-1690
410-821-1748 Fax

COMMONWEALTH OF VIRGINIA
04/29/22
JACOB TORONEY
Lic. No. 052906
PROFESSIONAL ENGINEER

MILESTONE SITE NAME:
AQUIA RUN WASTEWATER TREATMENT PLANT
SITE ADDRESS:
71 COAL LANDING ROAD
STAFFORD, VIRGINIA 22554
STAFFORD COUNTY

REVISIONS:

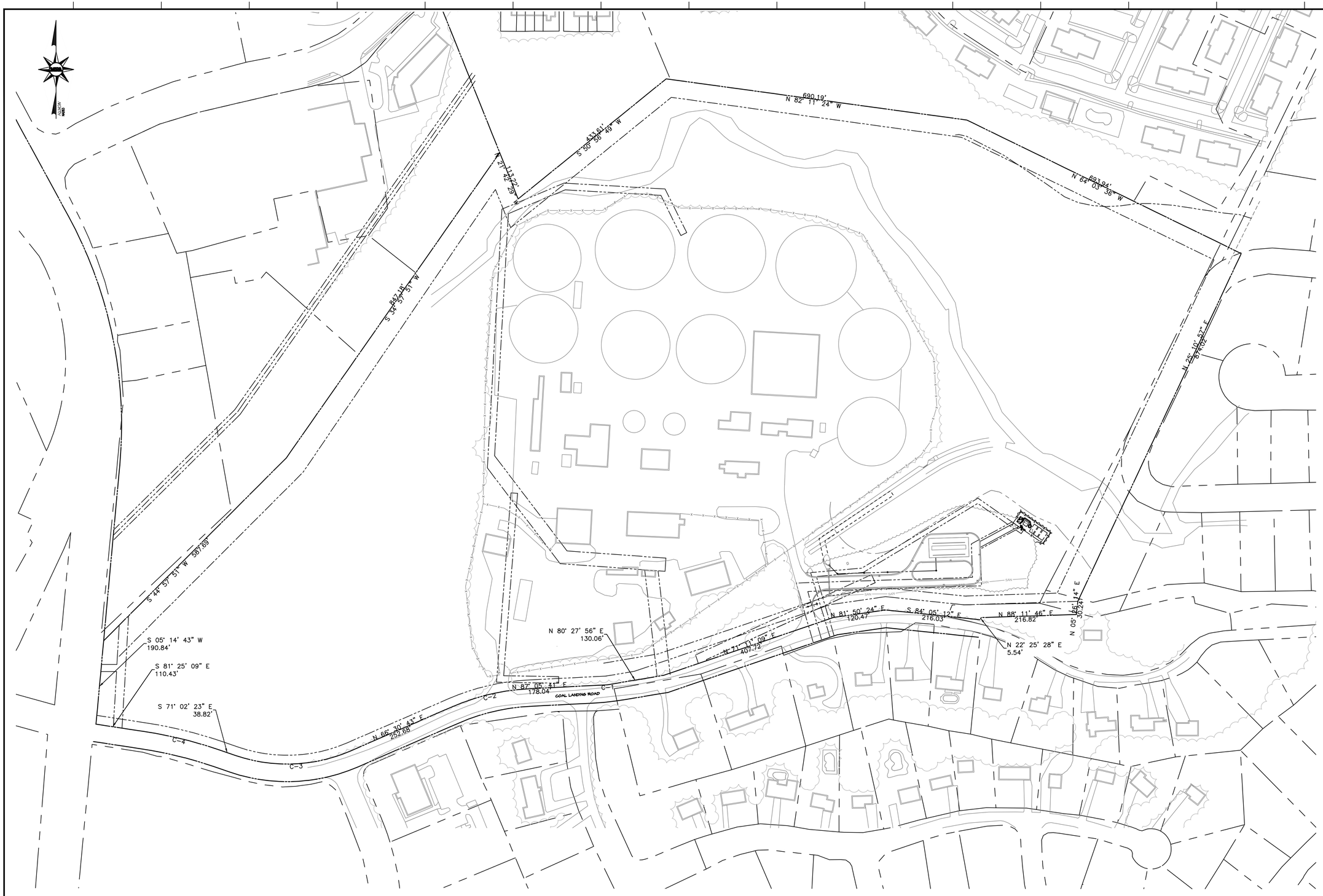
NO.	DESCRIPTION	DATE

DESIGNED BY:	DNT
DRAWN BY:	JT
PROJECT NO:	21235.003
DATE:	12/30/2021
SCALE:	AS NOTED

811
Know what's below.
Call before you dig.
PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE
THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPURTENANT.

TITLE:
Erosion & Sediment Control Narrative

SHEET:
C-5



SURVEY PLAN

SCALE: 1" = 100'-0"

100 0 100 200 300

Scale 1" = 100'
(SCALE BASED ON FULL SIZE 24"x36" SHEETS ONLY)

CURVE CHART				
#	RADIUS	ARC LENGTH	BEARING	CHORD LENGTH
C1	616.62	0.92'	N 87°03'06.93" E	0.92'
C2	497.46	178.709'	S 76°48'11.93" W	177.75'
C3	361.97	268.171'	N 87°44'09.93" E	262.08'
C4	974.93	176.611'	N 76°13'46.07" W	176.37'

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TITLE:

Survey Plan

SHEET:

C-6